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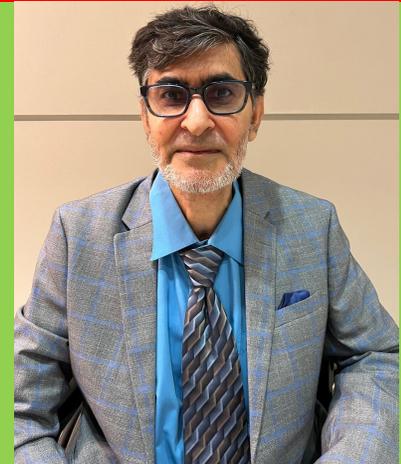
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# Message: from the President of BioNatural Healing College (BNHC)

Greetings!



I am thrilled to express my heartfelt gratitude to the Almighty God for granting me the privilege to introduce the BioNatural Healing College (BNHC) E-Magazine December edition to our esteemed readers. Additionally, I extend my thanks to each one of you, especially our cherished readers, for your invaluable feedback and unwavering support. It's important to emphasize that the content within this magazine is intended solely for educational purposes, the author's perspectives are independent of any affiliation with BNHC.

We have high hopes that this BNHC E-Magazine will prove to be a valuable resource, made possible by the diligent contributions of esteemed researchers and colleagues from across the globe. With gratitude, I wish you all the best in health and a life filled with prosperity.

Warmest regards,

Dr. Nadir Sidiqi, Ph.D.

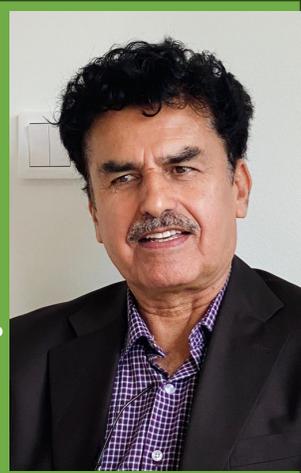


# BioNatural Healing College

## BioNatural Healing College Stands on Seven Core Pillar Foundations as follows:

1. All living organisms are made from the water this beautiful connection, connects us to praise the Creator of Creation for the provision of feeding, fueling, and healing to humanity.
2. No harm to public health and environmental health (Biodiversity) including pollinators, surface water, groundwater, soil, and air.
3. A series of complex chains involved with food production from the field to the mouth of the human body desperately needs scientific research to maximize healthy nutritionally food production and end malnutrition and food insecurity.
4. Harmful pests such as insects, and pathogens causing to human and plant health and loss of economic problems. BioNatural chemicals from plants, microorganisms, and ocean-living organisms exist and need further research to discover along with safety to utilize for the health improvement of humans as well as BioNatural Pest Management (insects, fungi, bacteria, various, nematodes, weeds, rodents, etc.).
5. Listen, love, appreciate, and respect with deep conscience and subconscious the connection between the genes of your body and beautifully ecologically in sense of feeling, feeding, fueling, and healing.
6. The brilliant human mind can irrigate with balance drinking clean water as a whole-body system to detoxify the toxicant from their body systems as well as to detoxify the soil, water, and environment from harmful chemicals, particularly pesticides through collaboration, and dedication from the individual, family, community, and scientific community locally and globally.
7. BioNatural Healing College provides a high-quality science base foundation through online education to fit and accommodate the needs of each prospective student for the sustainability and prosperity of his or her own, family, community, and humanity.

# *Ferula asafoetida*-A Review of its Potential Uses in Health Improvement By: Mr. Gada Mohammad Anas M.S.



**Abstract:** Among the various species of the perennial and drought-hardy plants under the genus *Ferula*, the *asafoetida* species is a main source of hing, a strong, tenacious, and oleo-gum resin of sulfurous odor of medicinal and therapeutic value. Hing refers to the dried resin or [latex](#) ([gum oleoresin](#)) exuded from the [rhizome](#) or [tap root](#) of several species of *Ferula*, a [perennial herb](#) that grows 1 to 1.5 m tall. It is a [monoecious](#), [herbaceous](#), [perennial plant](#) of the family [Apiaceae](#). *Asafoetida* has been consumed as a spice and as folk medicine for centuries. Recent studies have shown several promising biological activities particularly relaxant, neuroprotective, memory enhancing, digestive enzyme, antioxidant, antispasmodic, hypotensive, hepatoprotective, antimicrobial, anticarcinogenic, anticancer, anti cytotoxicity, antiobesity, anthelmintic and antagonistic effect. This review effectively deals with phytochemistry and various pharmacological and clinical studies of asafoetida.

**Introduction:** *Ferula asafoetida* L. is a herbaceous plant of the [Apiaceae](#) family. This herb grows naturally in the Himalia and Hindukush mountain ranges, especially in Afghanistan. It is used as a herb for treatment of some diseases in some parts of the world and used as a common spice in India. It was a wild plant that grew naturally in the mountains but now it has become domesticated and cultivated in the hills and plain areas of Afghanistan and Iran and neighboring countries.

This plant thrives under cold winter, moist spring and warm summer conditions to produce sufficient resin/gum which is used as medicine and as a spice. Ferula, locally known as "hing" is cultivated in northern and northeastern parts of Afghanistan as a sustainable source of income for rural households.

Ferula (a genus of many species) commonly known as asafoetida is used as a flavoring agent in food and is used as a traditional medicine for many diseases in many parts of world. Ferula resin is used as a digestive aid, in food as a condiment and in pickles. It is used in modern herbalism in the treatment of hysteria, some nervous conditions, bronchitis, asthma and whooping cough. It was at one time employed in the treatment of infantile pneumonia and flatulent colic. The gum resin is antispasmodic, carminative, expectorant, laxative, and sedative. The volatile oil in the gum permeates through the lungs, making it an excellent treatment for asthma.

The [resin](#)-like [gum](#) comes from the dried [sap](#) extracted from the stem and roots and is used as a [spice](#). The resin is greyish-white when fresh, but dries to a dark amber colour. Roots are thick, massive, and pulpy. They yield a resin similar to that of the stems. All parts of the plant have the distinctive fetid smell. Today, the most commonly available form is compounded asafoetida, a fine powder containing 30% asafoetida resin, along with [rice or white wheat flour](#) and [gum arabic](#)



Fig. 1- Asafoetida plant in flowering stage and the dried oleo-gum/resin harvested from root cuttings

This review summarizes recent progress on the health benefits of antioxidant phytochemicals, and discusses their potential mechanisms in the prevention and treatment of chronic diseases. **Geographic Range and Potential for Commercial Production:** The genus *Ferula* has 60 species, found on three continents: Central Asia, Europe, and North Africa, with Central Asia as the main source. Asafoetida is native to the eastern deserts of [Iran](#) and mountains of [Afghanistan](#) but is cultivated in [India](#), mainly in Kashmir and some parts of Punjab. Cultivation of hing has now spread to Afghanistan's neighbouring countries like Tajikistan and Uzbekistan. Asafoetida has a [pungent smell](#), but in cooked dishes, it delivers a smooth flavor reminiscent of [leeks](#). It is locally known as *Hing* in Afghanistan and as *Anghoza* in Iran. There are 28 species of *Ferula* found in Afghanistan but all of them are not resin-bearing. The asafoetida plant is found along the foothills of the Hindukush Mountain Range, to the north and the south, from Badakhshan to Bamyan at altitudes higher than 1000-m above sea level, requiring precipitation of 150-250 mm per year and soil pH of 8. It thrives on sandy loam soils under arid conditions on rangelands. The productivity of asafoetida growing in the wild, however, is low (20-40 g/plant) and the plant is endangered because of unsustainable harvesting methods which lead to the destruction of the crown buds and cause death of the plant, leading to species depletion.

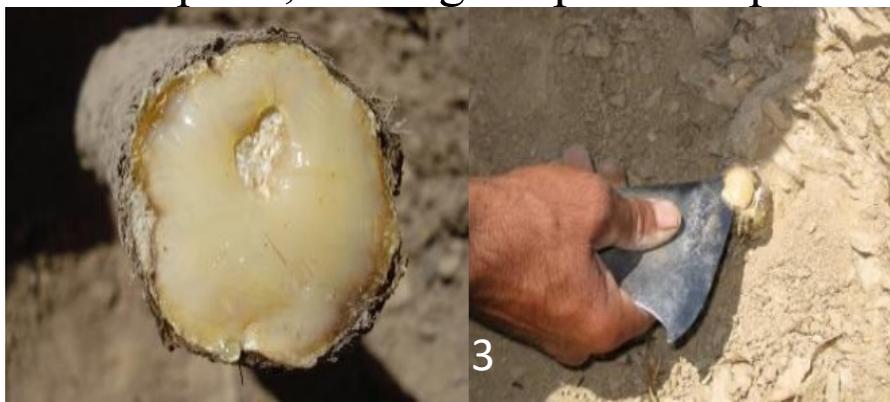


Fig. 2 - Harvesting of asafoetida gum/resin by farmers in Khulm District, Balkh Province, Afghanistan.

The Ministry of Agriculture, Irrigation and Livestock (MAIL) in Afghanistan recently developed a mega scheme for commercial cultivation, processing and exports of hing, mainly to India which is the leading hing consumer country in the world. Afghanistan's current volume of exports of raw hing to India stands at USD 100-million/year but under the investment plan requiring capital from the Afghan Private Sector, the government and international development partners, it is envisaged that the volume of exports would exceed USD 1-billion /year within a decade. This is an innovative approach for a plant that is native of Afghanistan and has been an export commodity for over a hundred years. This investment scheme calls for bringing 1-million hectares of mostly barren and unproductive lands of the dryland ecosystems under production, over the next 6-years, as a long-term, economically sustainable and environmentally sound plan (National Dry Lands Agriculture Policy, MAIL). ]



Fig. 3- Successful introduction of asafoetida along terraced hills in Khulm District of Balkh Province, Afghanistan

India is undoubtedly the largest consumer of hing products in the world with total sales in the order of billions of dollars. Therefore, as stated in the National Investment Plan for Hing (*Ferula asafoetida*) Cultivation, Processing and Export (MAIL), India represents an insatiable market for Afghanistan hing products.

**Culinary Uses:**Hing is used as a digestive aid, as it reduces [flatulence](#), in food as a [condiment](#), and in pickling. It plays a critical flavouring role in Indian vegetarian cuisine by acting as an [umami](#) enhancer(savory taste). Used along with [turmeric](#), it is a standard component of [lentil curries](#) such as [dall](#), as well as in numerous vegetable dishes, especially those based on potato and cauliflower. Kashmiri cuisine also uses it in lamb/mutton dishes. It is sometimes used to harmonize sweet, sour, salty, and spicy components in food. The spice is added to the food at the time of [tempering](#). Sometimes dried and ground hing (in very small quantities) can be mixed with salt and eaten with raw salad.

## **Medicinal Properties:**

### **1- Source of Antioxidants, Antioxidant Phytochemicals:**

Antioxidants are molecules that fight free radicals in the body. Free radicals are compounds that can cause harm if their levels become too high in the body. They're linked to multiple illnesses, including diabetes, heart disease, and cancer. The human body has its antioxidant defenses to keep free radicals in check.

However, antioxidants are also found in food, especially in fruits, vegetables, and other plant-based, whole foods. Several vitamins, such as vitamins E and C, are effective antioxidants. Overproduction of oxidants (reactive oxygen species and reactive nitrogen species) in the human body is responsible for the pathogenesis of some diseases. The scavenging of these oxidants is thought to be an effective measure to depress the level of oxidative stress of organisms. It has been reported that intake of vegetables and fruits is inversely associated with the risk of many chronic diseases, and antioxidant phytochemicals in vegetables and fruits are considered to be responsible for these health benefits. Antioxidant phytochemicals can be found in many foods and medicinal plants, and play an important role in the prevention and treatment of chronic diseases caused by oxidative stress. They often possess strong antioxidant and free radical scavenging abilities, as well as anti-inflammatory action, which are also the basis of other bioactivities and health benefits, such as anticancer, anti-aging, and protective action for cardiovascular diseases, diabetes mellitus, obesity and neurodegenerative diseases. As a result, antioxidants may also help protect against chronic inflammation, heart disease, cancer, and type 2 diabetes.

**2- Anti-inflammatory and Possibly Antinociceptive Properties:** Asafetida is well known for its medicinal and therapeutic values in Iranian folk medicine. In a hot plate conducted on mice in Iran, asafetida exhibited a significant antinociceptive effect at all administered doses and the most effective dose was 10 mg/kg. The results clearly indicated that asafetida could be a potential source of anti-inflammatory and analgesic agent. These effects may be due to its effective constituents such as monoterpenes, flavonoids and phenolic components that have antioxidant properties and inhibit lipoxygenase activity.

### **3- Plant Polyphenols as Dietary Antioxidants:**

Polyphenols are secondary metabolites of plants and are generally involved in defense against ultraviolet radiation or aggression by pathogens. In the last decade, there has been much interest in the potential health benefits of dietary plant polyphenols as antioxidants. Asafoetida has been shown to contain high amounts of phenolic compounds, such as tannins and [flavonoids](#), which are known for their potent antioxidant effects. Epidemiological studies and associated meta-analyses strongly suggest that long term consumption of diets rich in plant polyphenols offer protection against development of cancers, cardiovascular diseases, diabetes, osteoporosis and neurodegenerative diseases.

### **4- Source of Plant Phenolics:**

Phenolics are broadly distributed in the plant kingdom and are the most abundant secondary metabolites of plants. Plant polyphenols have drawn increasing attention due to their potent antioxidant properties and their marked effects in the prevention of various oxidative stress associated diseases such as cancer. In the last few years, the identification and development of phenolic compounds or extracts from different plants has become a major area of health- and medical-related research. Although test-tube and animal studies have found asafoetida to exhibit anti-inflammatory and antioxidant activity, more research needs to be done on its potential antioxidant effects in humans.

## **5- Anti-Carcinogenesis:**

In a chemopreventive study, the antioxidant and anticarcinogenic potential of asafoetida was demonstrated in Swiss albino mice. A single dose of TPA (20 nmol/0.2 ml acetone/animal), a known tumor promoter decreased the cellular antioxidant level significantly ( $p < 0.01$ ) when applied topically to mice skin. It also induced the ODC activity, rate of DNA synthesis, hydrogen peroxide level, xanthine oxidase activity, and protein carbonyl content in mice skin significantly ( $p < 0.01$ ). These events are early biomarkers of carcinogenesis. It was concluded that asafoetida is a potent antioxidant and can afford protection against free radical-mediated diseases such as carcinogenesis. It is important to note however that as asafoetida is used in such small amounts in cooking, it's unclear whether culinary use of the spice provides these benefits.

**6- Digestion Aid:** One of the most common uses of asafoetida is as an indigestion aid. In a month-long study including 43 adults with moderate to severe indigestion, those taking 250 mg capsules containing asafoetida twice a day reported significant improvements in bloating, digestion, and overall quality of life, compared with a placebo group. Asafoetida has also been shown to help boost digestion by increasing the activity of digestive enzymes. Specifically, it may increase the release of bile from your liver, which is needed for digesting fat. While the spice is also frequently used to prevent or reduce gas after eating, no research currently supports this effect.

**7- May Reduce Symptoms of IBS:** Irritable bowel Movement IBS is a chronic digestive condition that's characterized by abdominal pain or discomfort, bloating, and gas, as well as constipation, diarrhea, or both. Due to its potential effects on digestion, asafoetida is thought to help reduce symptoms associated with IBS. Two small studies in adults with IBS found a significant improvement in reported IBS symptoms after 2 weeks of taking asafoetida supplements. Yet, another study found that this supplement did not affect IBS symptoms.

## **8- Antibacterial, Antifungal, and Antimicrobial Effects:**

In a test tube study conducted in Iran, essential oils were first obtained from the seeds and oleo-gum-resin of asafetida using hydrodistillation. Four different concentrations of the oils were then prepared (2.5, 5, 10, and 20 µg/ml), and the antimicrobial activity of each dose against four oral bacteria (*Streptococcus mutans*, *Streptococcus sobrinus*, *Streptococcus sanguis*, *Streptococcus salivarius*, and *Lactobacillus rhamnosus*) was evaluated using the disk diffusion method. The study concluded that asafetida may protect against pathogens, such as various strains of *Streptococcus* bacteria.

## **9- May Lower Hypertension:**

Asafetida may help lower blood pressure by relaxing blood vessels. However, research is limited to animals.

## **10-Antispasmodic and Hypotensive Effects:**

The effects of Ferula asafetida gum extract on the contractile responses of the isolated guinea-pig ileum induced by acetylcholine, histamine and KCl, and on the mean arterial blood pressure of rat were investigated. It was shown that the gum extract (0.3-2.2 mg/100g body weight) significantly reduced the mean arterial blood pressure in anesthetized rats. The study indicated that that the relaxant compounds in asafetida gum extract may interfere with a variety of muscarinic, adrenergic and histamine receptor activities or with the mobilisation of calcium ions required for smooth muscle contraction non-specifically.

**11-Potential Anticancer Effects:** Animal and test-tube studies suggest that asafetida may help stop the growth and spread of certain cancer cells, including breast and liver cancer.

**12 - Antiproliferative and Apoptotic Properties:** Several in vitro animal studies have indicated that asafetida may help safeguard against memory loss and nerve damage in the brain. Therefore, asafetida may protect brain health.

**13 - May Ease Asthma Symptoms:** Animal studies have shown asafetida to have a relaxing effect on airway smooth muscles, which is important for the treatment of asthma.

It's also worth noting that these studies use a concentrated form of asafoetida rather than the amounts typically used when cooking. As a result, culinary uses of the spice may have minimal effects.

**Conclusion:** Asafoetida is rich in antioxidants and may provide multiple therapeutic benefits, particularly for digestive health and blood circulation. However, further research in humans is needed. It is also worth noting that these studies use a concentrated form of asafoetida rather than the amounts typically used when cooking. As a result, culinary uses of the spice may have minimal effects.

## References:

Antimicrobial Activity of the Essential Oil Obtained from the Seed and Oleo-Gum-Resin of *Ferula Assa-Foetida* against Oral Pathogens. [Alireza Daneshkazemi](#), [Hengameh Zandi](#), [Abdolrahim Davari](#), [Mahmood Vakili](#), [Majid Emtiazi](#), [Reza Lotfi](#), and [Seyed Mohammad Reza Masoumi](#). National Library of Medicine, 2019 Apr 30.

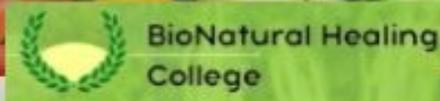
**Biological Activities and Medicinal Properties of Asafoetida: A Review.** [Augustine Amalraj](#) and [Sreeraj Gopi](#)\*. [J Tradit Complement Med](#). 2017 Jul; 7(3): 347–359. Published online 2016 Dec 20.

Evaluation of Anti-inflammatory and Some Possible Mechanisms of Antinociceptive Effect of *Ferula assa foetida* Oleo Gum Resin Seyyed Majid Bagheri, MSc1 , Sadegh Taghizade Hedesh, MD2 , Aghdas Mirjalili, MSc3 , and Mohammad Hossein Dashti-R, PhD4. *Journal of Evidence-Based Complementary & Alternative Medicine* 2016, Vol. 21(4) 271-276.

National Investment Plan for Hing (*Ferula asafoetida*) Cultivation, Processing and Export. Najib Malik,

Ministry of Agriculture, Irrigation and Livestock, Kabul, Islamic Republic of Afghanistan. Feb. 2020.  
National Dry Lands Agriculture Policy, Najib Malik, Ministry of Agriculture, Irrigation and Livestock, Kabul, Islamic Republic of Afghanistan, December 2018.

What Is Asafoetida? Benefits, Side Effects, and Uses. <https://www.healthline.com/nutrition/asafoetida-benefits#benefits>, Imashi Fernando, Updated on December 10, 2021.



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# Workshop Invitation: Dr. Nadir Sidiqi has been attended:

***Nurturing the Future: Establishing the Marburg Center for Oriental  
Traditional Medicine  
Faculty of Pharmacy, Philipps-University of Marburg, Germany  
November 6-10, 2023***



Workshop Presenters Colleagues

***Rethinking of Traditional Healing: BioNatural Products in  
Improvement of Humans and Plants Health  
Dr. Nadir Sidiqi Ph.D. BioNatural Healing College (BNHC) California,  
USA.***

# Certificate of Appreciation

Dr. Sidiqi, on behalf of BioNatural Healing College (BNHC) to Prof. Dr. Michael Keusgen & Prof. Dr. M. Osman Babury for their teaching, research, dedication, and significant contributions to the phytochemistry of Medicinal Plants in Central Asia Countries particularly Afghanistan.



***Nurturing the Future: Establishing the Marburg Center  
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**Mission:** BioNatural Healing College is a non-profit public benefit institution that has tax-exempt status under the Internal Revenue Service, Section 501(c)(3) of the United States of America. Our goal is to offer a high-quality education a diploma program as well as holistic health and nutrition conferences, seminars, workshop, and continuing education. The focus of these educational programs is to offer healing and holistic nutrition science through online distance learning. These dynamic online education programs will provide diverse adult learners throughout the world the experience of enhancing their quality of life, their health, and their happiness.

**Vision:** The faculty, staff and management team of BioNatural Healing College are passionately committed to providing the best teaching possible in this field. We seek to encourage, motivate and explain the importance of this field to prospective students so that they may make an informed decision regarding enrollment. We seek an ultimate goal of satisfaction for the student based on responsibility, commitment, respect, awareness and sustainable education for society.

**Accreditation and Recognition:** BioNatural Healing College is based in California. It is an institution that has the goal to deliver on- demand online distance learning around the globe. This education is of high quality and vocational in nature. BioNatural Healing College is a legal business entity that has been approved to operate by the State of California's Bureau for Private Postsecondary Education that set forth in the educational code. BioNatural Healing College is not accredited by the United States Department of Education. BioNatural Healing College is a member of the American Holistic Health Association (AHHA).

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